Further details of the operation will not be considered here.

One point of importance should be mentioned in reference to the advisibility of performing a high or low bronchoscopy. Killian and his followers advise a low bronchoscopy, involving a tracheotomy as being advisable in all conditions where a high operation cannot be easily performed, and they claim that the tracheotomy does not influence the prognosis. On the other hand, Schroetter of Vienna maintains that not to succeed in the high operation is an evidence of imperfect technic.

One case of foreign body in the lung that was under Killian's care during my visit was associated with more than passing interest. This case was in an individual who had suffered a round nail to enter his trachea. The patient had been referred by Shultess of Zuerich, and despite innumerable attempts on the part of Killian to extract the nail, his efforts were futile. Killian had many models of extracting instruments made for this case, but none of these were effective in separating the nail from the tissue, in which it lay so firmly imbedded. On the day that I left the clinic, Killian was to make his last attempt, and if this were to prove unsuccessful he contemplated pneumotomy. I have not heard of the subsequent history of the case.

While in Paris I saw considerable of Guisez. As he is the only individual in that city who has had much experience in this class of work, most of it is directed to him. He employs a ten per cent solution of cocain for anesthesia, at times a general narcosis.

All of the operations that I saw him perform were esophageal in character. One morning at the Hotel Dieu, I saw two carcinomata of the esophagus through the tube, and I also saw Guisez perform one operation through the esophagoscope for stricture of the esophagus. The cutting was done under direct observation and was followed by dilation, all at the same sitting. I also saw a child, upon whom a similar operation had been performed some time before. The child had swallowed lye, causing a stricture, for which a gastrostomy had been performed. Subsequent to the direct esophagotomy the gastrostomy wound closed. Both of the results in these cases were quite satisfactory. I also saw Guisez perform a similar operation at Tuffier's clinic.

The operation of esophagotomy in itself is not difficult, but it requires great patience on account of the hemorrhage and the accumulation of mucus, which obscure the field of operation.

In both the Killian and the Guisez clinics, strong solutions of cocain are used with no precautions, and I learned that they have had but little annoyance as far as toxic symptoms were concerned.

BRONCHOSCOPY.*

By E. C. SEWALL, M. D., San Francisco.

As the instruments used in bronchoscopy and esophagoscopy and the technic of their use have been ably described this evening, I wish to speak upon the value of the method as a means of diagnosis, and also to call attention to the diagnostic features, which should lead us to consider the use of them necessary.

There are some very important points to be taken into consideration in passing a tube into the esophagus. The narrowest part of this passage is about the level of the cricoid; below this it widens out considerably, being constricted again at the cardiac opening of the stomach. The difficulty is all encountered in passing the level of this narrowest part. Once the tube has entered the wider part of the esophagus, its passage is easy and diseased conditions can be studied at leisure.

There are, however, conditions of greatest importance lying at the upper end of the esophagus, at the point where we are not passing the tube under the directions of the eye, and where we are overcoming the angle between oral and esophageal cavities. At this time, we are apt to be using considerable force and it's just here that the greatest danger lies. Muculiez, who, following Kussman, was the pioneer in the use of the esophagoscope, reports two deaths from damage done at this point. To quote Starck of Karlsruhe, the conditions to be met here are: carcinoma, diverticulum, traumatic-cicatrices, foreign bodies, compression-stenoses, spasm, and specific inflammation, as lues and tuberculosis. His method of diagnosing these high-lying conditions is to pass the tube, with its close-fitting mandarin over the base of the tongue with the greatest care, and as soon as a resistance is felt, to withdraw the mandarin and study the obstruction under the eye.

Von Eicken of Killian's Clinic has characterized the examination of this particular field hypopharyngoscopy. He recommends two methods of giving one a better view, one is to grasp the larynx with the hand, and pull forward from the vertebral column. This is possible only in elderly people with thin necks. The other aid is the use of a hook or sound which Von Eichen has called the "larynx elevator." With this in a cocainized larynx, the larynx is pulled forward. He then examines with a tube spatula under the direction of the eye without the aid of a mandarin.

The diverticulum is not an uncommon condition met with in this particular part of the esophagus. The chief aim in the study of such a condition through the esophagoscope is to find its lower opening, in the hope that it might be dilated by sounds beneficially.

I have had experience in one such case. Patient was a man about 60 years of age, referred by Dr. Cheney, who had made the diagnosis from the history of a diverticulum. A mandarin was first passed until the obstruction was reached at the level of the cricoid cartilage. Next a tube was passed and the diverticulum entered without difficulty. The walls, as far as they could be studied, were normal in color, but the inferior wall was very thin and would have been very easily ruptured on the pas-

*Read before the Society of Eye, Ear, Nose and Throat Surgeons of San Francisco.

sage of a sound with any force. Large quantities of mucus were drawn off, but after careful search, the opening into the esophagus could not be found. Generally, this opening lies in the left or anterior wall of the diverticulum; but often cannot be found because of its location and extreme narrowness.

A case of stricture of the esophagus in which we were apparently able to increase the calibre of the tube is of interest. Patient, woman, age 60 years, presented herself at Cooper College Clinic with a history of long standing obstruction of the esophagus. She had such difficulty in swallowing that she was only able to take fluids. The condition had existed, although less pronounced, throughout her life. Of late years, it had grown more difficult for her to take food. She gave absolutely no history of a trauma of any sort, or other circumstance to which the trouble could be attributed. She was treated in the medical clinic of Cooper College some 20 years ago, but they were unable to pass the sound, the patient said.

Examination showed nothing pathological until an attempt was made to pass the mandarin. A distinct obstruction was felt about 25 c. m. from the teeth. A tube was then passed and the obstruction distinctly seen. The narrowing was concentric with a small aperture ½ c. m. in circumference at the bottom. Into this we were able to pass a mandarin and under guidance of the eye it was forced through the stricture. This procedure has been repeated twice a week for some weeks, and the patient said she could swallow somewhat better. She has returned to her home at present, but we hope to be able to go on to some definite result in the future.

The diagnosis of the presence of a foreign body in the lungs is not always easy, as a case that was presented while I was in Prof. Killian's clinic shows. This patient had been under able doctors who had failed to make a diagnosis, and even sent him to a resort for tuberculosis. He refused to show signs of the disease, however, and Prof. Killian cured him by taking a large piece of bone out of a bronchus, after X-ray had failed to demonstrate it.

The history of the case is the first consideration and often carries with it the diagnosis. But things are occasionally aspirated without the patient really being aware of it. Coughing is one of the first symptoms expected, but this may entirely cease, or may be intermittent in character. Expectoration is present at times, and where the body has lain until an abscess has formed, there may be profuse discharge of pus, sometimes bloody. A feeling of pain is often called attention to by the patient, also an oppressive sensation of suffocation. The dyspnea varies from being not noticeable to the extreme condition, accompanied by cyanosis, retraction of the intercostal spaces, and rapid shallow gasps.

The Roentgen ray may help or not according to the substance aspirated, bone will often not be definitely shown when even of good size.

A comparison of the two sides of the chest is of the utmost importance. Dyspnea with no difference in the findings in the two sides points to the location of the foreign body in the trachea. A lack of movement of one side accompanied by feeble breath sounds, a flattened percussion note, point to the location of the foreign body in the corresponding bronchus. All signs are sometimes obscured by emphysema which can readily occur in these cases, a fully obdurating foreign body giving no signs where accompanied by emphysema, according to Von Eicken.

DISCUSSION.

Dr. Welty: We should all be very thankful especially to Dr. Selfridge for presenting this subject in this clear and concise manner. This is almost a new field, and great good has been accomplished all over the world.

I wish to report two cases, one in a child six years old, who carried the pin in the larynx for two weeks. This open safety pin which I show you was lodged in the larynx just below the vocal cords. During the first week the child suffered greatly with paroxysms of dyspnea. No pain. During the second week would have paroxysms of coughing without pain. The slightest manipulation of the neck would produce a cough. The pin was located with the X-ray, child put under general anesthesia, after which the parts were cocainized and the foreign body removed by the same manipulation that you have seen this evening. An uneventful recovery.

Case No. 2. Some three months ago, a man aged 46, while eating a chop felt something lodged in his throat. Consulted several specialists who could not locate foreign body. On very careful examination under cocain anesthesia, I could not locate the spot that suggested the slightest suspicion of irritation, and I could see as far as the bifurcation of the trachea. The following day I introduced the tube into the esophagus, encountering considerable difficulty. After it was in place my light failed, and I had to remove the tube, intending to introduce a larger tube. However, he would not submit to further manipulation on that day. Thirty minutes later he had a severe coughing spell and coughed up the foreign body. Evidently I had loosened the foreign body by the introduction of my tube.

GENERAL PARESIS.*

By G. D. MARVIN, M. D., Agnew.

I have selected general paresis as my theme because of the importance of the disease in this period of rapid development, and as it is one of the diseases of civilization it teaches us that the price some pay for it is rather high. McPherson's definition of general paresis is "a subacute inflammatory disease of the brain, occasionally extending to the spinal cord and the larger nerve trunks. It is characterized by the concomitant appearance of mental and physical symptoms. On the mental side there is progressive dementia, to which is superadded insanity of the maniacal, melancholic or confusional type. On the physical side there is paresis and inco-ordination of certain parts of the motor mechanism with partial degeneration of the osseous cartilaginous and muscular tissues." The disease occurs in the active period of life, the larger number of cases appearing between the ages of thirty-five and forty-five. It occurs more

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